



The Chemical Company

Safety Data Sheet

Irganox® 1076 FD

Revision date : 2014/07/10

Version: 2.0

Page: 1/10

(56366867/SDS GEN US/EN)

1. Identification

Product identifier used on the label

Irganox® 1076 FD

Recommended use of the chemical and restriction on use

Unsuitable for use: This material is not intended for use in products for which prolonged contact with mucous membranes, body fluids or abraded skin, or implantation within the human body, is specifically intended, unless the finished product has been tested in accordance with nationally and internationally applicable safety testing requirements. Because of the wide range of such potential uses, we are not able to recommend this material as safe and effective for such uses and assume no liability for such uses.

Recommended use*: Antioxidant / Stabilizer

* The "Recommended use" identified for this product is provided solely to comply with a US Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:

BASF CORPORATION
100 Park Avenue
Florham Park, NJ 07932, USA

Telephone: +1 973 245-6000

Emergency telephone number

CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification

2. Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Classification of the product

Combustible Dust

Combustible Dust (1)

Combustible Dust

Label elements

Safety Data Sheet

Irganox® 1076 FD

Revision date : 2014/07/10

Version: 2.0

Page: 2/10

(56366867/SDS_GEN_US/EN)

Signal Word:

Warning

Hazard Statement:

May form combustible dust concentration in air.

Hazards not otherwise classified

The product is under certain conditions capable of dust explosion.

According to Regulation 1994 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Emergency overview

CAUTION:

Contact with the eyes or skin may cause mechanical irritation.

Prolonged or repeated exposure may cause liver damage.

Take precautionary measures against static discharges.

Use NIOSH approved respirator as needed to mitigate exposure.

3. Composition / Information on Ingredients

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

<u>CAS Number</u>	<u>Content (W/W)</u>	<u>Chemical name</u>
Trade Secret	100.0 %	Organic Antioxidant

This product does not contain any components classified as hazardous under the referenced regulation.

According to Regulation 1994 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

<u>CAS Number</u>	<u>Content (W/W)</u>	<u>Chemical name</u>
Trade Secret	100.0 %	Organic Antioxidant

4. First-Aid Measures

Description of first aid measures

General advice:

Remove contaminated clothing.

If inhaled:

If difficulties occur after dust has been inhaled, remove to fresh air and seek medical attention.

If on skin:

Wash thoroughly with soap and water.

If irritation develops, seek medical attention.

If in eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open.

Safety Data Sheet

Irganox® 1076 FD

Revision date : 2014/07/10

Version: 2.0

Page: 3/10

(56366867/SDS_GEN_US/EN)

If irritation develops, seek medical attention.

If swallowed:

Rinse mouth and then drink plenty of water. Do not induce vomiting. Immediate medical attention required.

Most important symptoms and effects, both acute and delayed

Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

Further important symptoms and effects are so far not known.

Indication of any immediate medical attention and special treatment needed

Note to physician

Treatment:

Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:
dry powder, foam

Unsuitable extinguishing media for safety reasons:
carbon dioxide

Additional information:

Avoid whirling up the material/product because of the danger of dust explosion.

Special hazards arising from the substance or mixture

Hazards during fire-fighting:

harmful vapours

Evolution of fumes/fog. The substances/groups of substances mentioned can be released in case of fire.

Advice for fire-fighters

Protective equipment for fire-fighting:

Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Further information:

Dusty conditions may ignite explosively in the presence of an ignition source causing flash fire.

6. Accidental release measures

Further accidental release measures:

Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Avoid the formation and build-up of dust - danger of dust explosion. Dust in sufficient concentration can result in an explosive mixture in air. Handle to minimize dusting and eliminate open flame and other sources of ignition.

Personal precautions, protective equipment and emergency procedures

Safety Data Sheet

Irganox® 1076 FD

Revision date : 2014/07/10

Version: 2.0

Page: 4/10

(56366867/SDS_GEN_US/EN)

Avoid dust formation. Use personal protective clothing.

Environmental precautions

Contain contaminated water/firefighting water. Do not discharge into drains/surface waters/groundwater.

Methods and material for containment and cleaning up

Nonsparking tools should be used.

7. Handling and Storage

Precautions for safe handling

Breathing must be protected when large quantities are decanted without local exhaust ventilation.

Closed containers should only be opened in well-ventilated areas. Avoid dust formation. Do not use any sparking tools.

Protection against fire and explosion:

Avoid dust formation. Dust in sufficient concentration can result in an explosive mixture in air. Handle to minimize dusting and eliminate open flame and other sources of ignition. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres.

Dust explosion class: Dust explosion class 2 (Kst-value 200 up to 300 bar m s-1).

Conditions for safe storage, including any incompatibilities

Further information on storage conditions: Keep container tightly closed and dry; store in a cool place.

Storage stability:

Storage temperature: < 40 °C

The packed product is not damaged by low temperatures or by frost.

Protect from temperatures above: 40 °C

The packed product must be protected against exceeding the indicated temperature.

8. Exposure Controls/Personal Protection

Advice on system design:

It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment). Use only appropriately classified electrical equipment and powered industrial trucks.

Personal protective equipment

Respiratory protection:

Breathing protection if breathable aerosols/dust are formed. Wear respiratory protection if ventilation is inadequate. Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator.

Safety Data Sheet

Irganox® 1076 FD

Revision date : 2014/07/10

Version: 2.0

Page: 5/10

(56366867/SDS_GEN_US/EN)

Observe OSHA regulations for respirator use (29 CFR 1910.134).

Hand protection:

Wear chemical resistant protective gloves.

Eye protection:

Safety glasses with side-shields.

Body protection:

Body protection must be chosen based on level of activity and exposure.

General safety and hygiene measures:

Wear protective clothing as necessary to minimize contact. Handle in accordance with good industrial hygiene and safety practice. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties

Form:	granules, crystalline	
Odour:	odourless	
Odour threshold:		No applicable information available.
Colour:	white	
pH value:	approx. 5.7	(1 %(m))
Melting point:	49 - 53 °C	
Boiling point:	323 °C	(1,013.25 hPa) (OECD Guideline 103)
Sublimation point:		No applicable information available.
Flash point:	273 °C	(DIN 51584)
Flammability:	not highly flammable	(Directive 84/449/EEC, A.10)
Autoignition:	340 °C	
Vapour pressure:	26.6 Pa	(250 °C)
Density:	1.012 g/cm3	(20 °C) (OECD Guideline 109)
Relative density:	1.012	(OECD Guideline 109)
Bulk density:	approx. 500 - 550 g/l	(23 °C)
Partitioning coefficient n-octanol/water (log Pow):	> 6	(20 - 25 °C)
Self-ignition temperature:		not self-igniting
Thermal decomposition:	> 350 °C	
Viscosity, dynamic:		not relevant
Viscosity, kinematic:		not relevant
Particle size:	D50 40.2 µm	(measured)
Solubility in water:	< 0.0002 g/l	(20 °C)
Evaporation rate:		The product is a non-volatile solid.
Other Information:	If necessary, information on other physical and chemical parameters is indicated in this section.	

10. Stability and Reactivity

Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

Corrosion to metals:

No corrosive effect on metal.

Safety Data Sheet

Irganox® 1076 FD

Revision date : 2014/07/10

Version: 2.0

Page: 6/10

(56366867/SDS_GEN_US/EN)

Oxidizing properties:
not fire-propagating

Dust explosion class:

Dust explosion class 2 (Kst-value 200 up to 300 bar m s-1) (St 2)

Formation of
flammable gases:

Remarks:

Forms no flammable gases in the
presence of water.

Chemical stability

The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions

Dust explosion hazard.

Conditions to avoid

Avoid dust formation. Avoid deposition of dust. Avoid all sources of ignition: heat, sparks, open flame. Avoid electro-static charge.

Incompatible materials

strong acids, strong bases, strong oxidizing agents

Hazardous decomposition products

Decomposition products:

No hazardous decomposition products if stored and handled as prescribed/indicated.

Thermal decomposition:

> 350 °C

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Primary routes of entry

Ingestion.

Skin

Inhalation.

Eyes

Acute Toxicity/Effects

Oral

Type of value: LD50

Species: rat

Value: > 5,000 mg/kg

Inhalation

Type of value: LC50

Species: rat

Value: > 1,800 mg/m3 (OECD Guideline 403)

Safety Data Sheet

Irganox® 1076 FD

Revision date : 2014/07/10

Version: 2.0

Page: 7/10

(56366867/SDS_GEN_US/EN)

Dermal

Type of value: LD50

Species: rabbit

Value: > 2,000 mg/kg

Assessment other acute effects

Assessment of STOT single:

Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

Irritation / corrosion

Assessment of irritating effects: Not irritating to the skin. Not irritating to the eyes.

Skin

Species: rabbit

Result: non-irritant

Eye

Species: rabbit

Result: non-irritant

Sensitization

Assessment of sensitization: Human data do not fully exclude a skin sensitizing potential. Skin sensitizing effects were not observed in animal studies.

other

Species: guinea pig

Result: Non-sensitizing.

Aspiration Hazard

No aspiration hazard expected.

Chronic Toxicity/Effects

Repeated dose toxicity

Assessment of repeated dose toxicity: May affect the liver as indicated in animal studies.

Genetic toxicity

Genetic toxicity in vitro: Ames-test negative

Genetic toxicity in vivo: Cytogenetic assay hamster negative

Carcinogenicity

Assessment of carcinogenicity: None of the components in this product at concentrations greater than 0.1% are listed by IARC; NTP, OSHA or ACGIH as a carcinogen.

In long-term studies in rats and mice in which the substance was given by feed, a carcinogenic effect was not observed.

Reproductive toxicity

Assessment of reproduction toxicity: The results of animal studies gave no indication of a fertility impairing effect.

Reproduction

Experimental/calculated data: rat

NOAEL Mat.: > 5,000 ppm

Development

Safety Data Sheet

Irganox® 1076 FD

Revision date : 2014/07/10

Version: 2.0

Page: 8/10

(56366867/SDS_GEN_US/EN)

rat

NOAEL Mat.: > 1,000 mg/kg

Other Information

Contact allergenic properties have not been observed in test animals (guinea pigs). In humans workroom temperatures of about 40°C and profuse sweating might exacerbate potential irritancy and rashes may develop.

Symptoms of Exposure

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

Further important symptoms and effects are so far not known.

12. Ecological Information

Toxicity

Aquatic toxicity

Assessment of aquatic toxicity:

There is a high probability that the product is not acutely harmful to aquatic organisms. No toxic effects occur within the range of solubility. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

Toxicity to fish

LC50 (96 h) > 100 mg/l, Fish

Aquatic invertebrates

EC50 > 100 mg/l, Daphnia magna

Aquatic plants

EC50 (72 h) > 30 mg/l, Scenedesmus sp.

Tested above maximum solubility. No toxic effects occur within the range of solubility. No effects at the highest test concentration.

Chronic toxicity to fish

No data available regarding toxicity to fish.

Chronic toxicity to aquatic invertebrates

No observed effect concentration (21 d) \geq 2 mg/l, Daphnia magna (OECD Guideline 211, semistatic)

The product has low solubility in the test medium. A saturated solution has been tested. Limit concentration test only (LIMIT test). The details of the toxic effect relate to the nominal concentration. No toxic effects occur within the range of solubility.

Microorganisms/Effect on activated sludge

Toxicity to microorganisms

activated sludge/EC50 (3 h): > 100 mg/l

Persistence and degradability

Assessment biodegradation and elimination (H2O)

The product is virtually insoluble in water and can thus be separated from water mechanically in suitable effluent treatment plants. Well eliminable from water by adsorption on activated sludge.

Safety Data Sheet

Irganox® 1076 FD

Revision date : 2014/07/10

Version: 2.0

Page: 9/10

(56366867/SDS_GEN_US/EN)

Elimination information

Not readily biodegradable (by OECD criteria).

Primary degradation.

Information on Stability in Water (Hydrolysis)

$t_{1/2}$ 7.2 a (25 °C), (calculated, pH7)

In contact with water the substance will hydrolyse slowly.

Bioaccumulative potential

Assessment bioaccumulation potential

Accumulation in organisms is not to be expected.

Bioaccumulation potential

Bioconcentration factor: < 100, Cyprinus carpio (OPPTS 850.1730 (EPA Guideline))

Mobility in soil

Assessment transport between environmental compartments

The substance will not evaporate into the atmosphere from the water surface.

Adsorption to solid soil phase is expected.

Additional information

Other ecotoxicological advice:

Do not discharge product into the environment without control.

13. Disposal considerations

Waste disposal of substance:

Do not discharge into drains/surface waters/groundwater. Dispose of in accordance with national, state and local regulations.

Container disposal:

Dispose of in accordance with national, state and local regulations. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

14. Transport Information

Land transport

USDOT

Not classified as a dangerous good under transport regulations

Sea transport

IMDG

Not classified as a dangerous good under transport regulations

Air transport

IATA/ICAO

Not classified as a dangerous good under transport regulations

Safety Data Sheet

Irganox® 1076 FD

Revision date : 2014/07/10

Version: 2.0

Page: 10/10

(56366867/SDS_GEN_US/EN)

15. Regulatory Information

Federal Regulations

Registration status:

Chemical TSCA, US released / listed

EPCRA 311/312 (Hazard categories): Fire (Combustible Dust);

NFPA Hazard codes:

Health : 1 Fire: 2 Reactivity: 0 Special:

HMIS III rating

Health: 1 Flammability: 2 Physical hazard: 0

16. Other Information

SDS Prepared by:

BASF NA Product Regulations

SDS Prepared on: 2014/07/10

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

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